

09/701947

WO 00/22112

10 Nov PCT/US99/23731
05 DEC 2000

SEQUENCE LISTING

<110> UNIVERSITY OF GEORGIA RESEARCH FOUNDATION, INC.

<120> STABILIZED BIOACTIVE PEPTIDES AND METHODS OF
IDENTIFICATION, SYNTHESIS AND USE

<130> 235.00010201

<140> Unassigned

<141> 1999-10-12

<150> 60/104,013

<151> 1998-10-13

<150> 60/112,150

<151> 1998-12-14

<160> 110

<170> PatentIn Ver. 2.0

<210> 1

<211> 133

<212> DNA

<213> Escherichia coli

<400> 1

ggcagtggc gcaacgcaat taatgtgagt tagctcactc attaggcacc ccaggcttta 60
cactttatgc ttccggctcg tatgttgtgt ggaattgtga gcgataaca atttcacaca 120
ggaaacagct atg 133

<210> 2

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: peptide
having opposite charge ending motif

<400> 2

Met Glu Asp Glu Asp Xaa
1 5 10 15

Xaa Xaa Xaa Xaa Arg Lys Arg Lys
20 25

<210> 3

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
angiotensin

<400> 3

Ile Pro Asp Arg Val Tyr Ile His Pro Phe His Ile Pro Pro
1 5 10

<210> 4

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
angiotensin

<400> 4

Glu Asp Glu Asp Asp Arg Val Tyr Ile His Pro Phe His Ile Arg Lys
1 5 10 15

Arg Lys

<210> 5

<211> 10

<212> PRT

<213> Homo sapiens

<400> 5

Asp Arg Val Tyr Ile His Pro Phe His Ile
1 5 10

<210> 6

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 6

atgtgcattt cccaggcat

<210> 7

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 7

atcgattttt taagatcttt ctcttgtggaa atttttttttt

40

<210> 8

<211> 37

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 8

atcgatttca ccatggacac catcgaaatgg tgcaaaaa

37

<210> 9

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 9

atgtttggcc ttgtctggcag

19

<210> 10

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 10

tgtatgaaat cccgggtacc atgggttaag accaaaaggcc ctc

43

<210> 11
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<23> Description of Artificial Sequence: primer

<400> 11
tactatacatat ctagaccat gattacggat tcactg 36

<210> 12
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<23> Description of Artificial Sequence: primer

<400> 12
tacataaaagc ttggccctgcc cggttattat tatttt 36

<210> 13
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<23> Description of Artificial Sequence: primer

<400> 13
tatcatatgc agaggaaaca gctatgacca tgattacqga ttcaactg 47

<210> 14
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<23> Description of Artificial Sequence: primer

<400> 14
tacatatactcg agcaggaaag cttggccctgc ccggttatta ttatTTT 47

<210> 15
<211> 47
<212> DNA

<213> Artificial Sequence

<420>

<210> Description of Artificial sequence: primer

<400> 15

tatcatgat ccaggaaaca gctatgasca tattaaacgttccatc

47

<210> 16

<211> 36

<212> DNA

<213> Artificial Sequence

<210>

<213> Description of Artificial sequence: primer

<400> 16

tatcatgat ctatggctat ccacgaaaaac aaacacg

36

<210> 17

<211> 40

<212> DNA

<213> Artificial Sequence

<210>

<213> Description of Artificial Sequence: primer

<400> 17

atataatacg tttaaaaat cttcgttagt ttctgtacg

40

<210> 18

<211> 35

<212> DNA

<213> Artificial Sequence

<210>

<213> Description of Artificial Sequence: primer

<400> 18

tatcatgat ctatgaacaa aggtgtaatg cgacc

35

<210> 19

<211> 35

<212> DNA

<213> Artificial Sequence

<210>

<213> Description of Artificial Sequence: primer

<400> 19

attagttaat tggccaaatc ttgtttatca gtcgt

31

<410> 20

<411> 15

<412> DNA

<413> Artificial Sequence

<420>

<423> Description of Artificial Sequence: primer
fragment

<400> 20

agatctttatg aattc

15

<410> 21

<411> 15

<412> DNA

<413> Artificial Sequence

<420>

<423> Description of Artificial Sequence: primer
fragment

<400> 21

agatctttatg aattc

15

<410> 22

<411> 15

<412> DNA

<413> Artificial Sequence

<420>

<423> Description of Artificial Sequence: primer
fragment

<400> 22

agatctttatg aattc

15

<410> 23

<411> 93

<412> DNA

<413> Artificial Sequence

<420>

<423> Description of Artificial Sequence: randomized
oligonucleotide

- 2100: 14
- 2110: 38
- 2120: DNA
- 2130: Artificial Sequence

< 220>
< 223> Description of Artificial Sequence: primer

• 400-24

- 210 - 25
- 211 - 26
- 212 - DNA
- 213 - Artificial Sequence

- 323 - Description of Artificial Sequence: primer

• 400± 25
tcattaaatgc aqcttggcacq

- 210 - 16
- 211 - 10
- 212 - DNA
- 213 - Artificial Sequence

-323. Description of Artificial Sequence: primer

• 400 • 26

- 210 - 17
- 211 - 29
- 212 - DNA
- 213 - Artificial Sequence

• 220 •
0223 - Description of Artificial Sequence: primer

4400 > 27
targeted on attachment

<210> 28

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 16

atgtacgatq aqeqcattgt

28

<210> 29

<211> 92

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: antisense
oligonucleotide

<400> 29

tactatagat ctacggtcac tgaattttgt ggcttggacc accaactgcc ttagtaata 60
tgaaugactg aaattaataa gaattctcgca ca 92

<210> 30

<211> 91

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: antisense
oligonucleotide

<400> 30

tactatagat ctacgtggcg ggactcatgg attaagggtt gggacgtggg gtttatgggt 60
taaaaatgtt tgataataag aattctcgac a 91

<210> 31

<211> 92

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: antisense
oligonucleotide

<400> 31

<214> P4
<215> P3
<216> DNA
<217> Artificial Sequence

<220>
<221> Description of Artificial Sequence: antisense
oligonucleotide

4403 32 tactatacgat ctaacggaccg tgaagtgtatg ttttgtggcaaa aacagggatg caaggaaacgaa 60
aaggatagg ccggatataata aqaatttctcg aca 99

- 210: 33
- 211: 93
- 212: DNA
- 213: Artificial Sequence

• 223. Description of Artificial Sequence: antisense oligonucleotide

<400 · 33 tactatagat ctacgagggg cgccaaactaa gggggggggga aggtatttgt cccgtgcata 60
atctcgggtg ttgtctaata aqaattctcq aca 93

<210> 34
<211> 13
<212> PRT
<213> Artificial Sequence

·223 · Description of Artificial Sequence: stabilized peptide

Met Val Thr Glu Phe Cys Gly Leu Leu Asp Gin Leu Pro
 1 5 10

<210> 35
<211> 86
<212> DNA
<213> Artificial Sequence

<210>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 35

caggaaatcatatggtcac tgaattttat agtttgttg accaacttgtt tttagtaataq 60
tggaaaggctt aaatataataa gatcc 80

<210> 36

<211> 16

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
peptide

<400> 36

Net Trp Arg Asp Ser Trp Ile Lys Gly Arg Asp Val Gly Phe Met Gly
1 5 10 15

<210> 37

<211> 85

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 37

caggaaatcatatggcgg ggactcatgg attaagggtt gggacgtggg gtttatgggt 60
taaaaatgtt tgataataag aatcc 85

<210> 38

<211> 141

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 38

caggaaatcatatggcagg gggacatgtg accgaggagt gcaaggccgg cttgtccaat 60
cggtggatct acgtataataq aatttctatg tttgtacatgt tatcatcgat aacgtttaat 120
gggttagtt atcacatgtt a 141

<210> 39

<211> 41

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 39

Met Ser Gly Gly His Val Thr Arg Glu Cys Lys Ser Ala Met Ser Asn
1 5 10 15

Arg Trp Ile Tyr Val Ile Arg Ile Leu Met Ile Arg Ser Ile Ser Ser
20 25 30

Ile Ser Phe Asn Ala Val Val Tyr His Ser
35 40

<210> 40

<211> 6

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 40

Met Tyr Leu Phe Ile Gly
1 5

<210> 41

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 41

caggaaagat ctatgtattt gttcatcgga taatacttaa tggccggctg gagaacttca 60
gtttaataag aattc 75

<210> 40
<211> 87
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 41

caggaaaaat ctatgtttct atttgggggg cactggggc agaaaggccg atatcttact 60
atgcataaccgt caaggtataa agaattc 87

<210> 43

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
peptide

<400> 43

Met Leu Leu Phe Gly Gly Asp Cys Gly Lys Ala Gly Tyr Phe Thr Val
1 5 10 15

Leu Pro Ser Arg
20

<210> 44
<211> 75
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 44

caggaaaaat ctatgattgg gggatcggttg agtttcgcct gggcaataatgt ttttaataa 60
atttttcatg tttga 75

<210> 45

<211> 28

<212> PRT

<213> Artificial Sequence

<210> 1

<213> Description of Artificial Sequence: stabilized peptide

<400> 45

Met Ile Gly Gly Ser Leu Ser Phe Ala Trp Ala Ile Val Cys Asn Lys
1 5 10 15Asn Ser His Val
20

<210> 46

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 46

Met Asn Gly Arg Thr Lys Arg Ile Arg Asp Pro Pro Ala Ala
1 5 10

<210> 47

<211> 86

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 47

caggaaagat ctatgaacgg ccaacaacaaa cgaatccggg acccaccaggc cgcctaaaca 60
gttaccagct gtggtaataa gaattc 86

<210> 48

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 41

Met Asp Arg Glu Val Met Cys Ala Ala Lys Gin Glu Trp Lys Glu Arg
1 5 10 15

Thr Pro

<210> 42

<211> 87

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 43

caggaaagat ctatggaccc tgaagtgtatg tggcgccaa aacaggaaatg gaaaggaaacg 60
acgcctatgg cggcgtaata agaattc 67

<210> 50

<211> 87

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 50

caggaaagat ctatgttagcc caatgcactg ggagcacgcg tgtaggtct agaagccacg 60
taccatattt atccataata agaattc 67

<210> 51

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
peptide

<400> 51

Met Leu Gly Leu Glu Ala Thr Tyr Pro Phe Asn Pro
1 5 10

<210> 50
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: stabilized peptide

<400> 52
Met Arg Gly Ala Asn
1 5

<210> 53
<211> 87
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 53
caggaaagat ctatgagggg cgcccaactaa gggggggggga agtttattgt cccgttgtata 60
atctcggttg ttgtctaata agaattc 67

<210> 54
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: N-terminal protective sequence

<400> 54
Xaa Pro Pro Xaa
1

<210> 55
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 55
tactatacatatataaccas acaqqaaaaa accggcc 36

<210> 56
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 56
tatatagtatt cagttgcctca catgttcttt cctgcgg 36

<210> 57
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 57
aattcataact atagatctat gaccaaacag gaaaaaaaccg c 41

<210> 58
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 58
tatataatac atgtcagaat tcgagggttt caccgtcatac ac 42

<210> 59
<211> 96
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: randomized oligonucleotide

<400> 59
tactatacatatataaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 60

nnnnnnnnnn nnnnnccatag atctgttgtgtc tggat 36
<210> 60
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 60
atcacatgcac ggagatctat g 21

<210> 61
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: randomized
oligonucleotide

<400> 61
tactatgaat tcnnngaaatt ctgccaccac tactat 36

<210> 62
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 62
atagtatgtgg tggcagaatt c 21

<210> 63
<211> 105
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: randomized
oligonucleotide

<400> 63
tactatagat ctatcccgcc gnnnnnnnn nnnnnnnnn nnnnnnnnn. 60
nnnnnnnnnn nnnnnnnnn nccggcgtaa taagaattcg tacat 105

<210> 64

<211> 64

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 64

atgttgcata ttttattatcgt gggg

24

<210> 65

<211> 90

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: randomized oligonucleotide

<400> 65

tactatacat ctatgvana nvanvanvan vanvanvanv anvanvanva nvanvanvan 60
vanvantaaat aagaatttcg ccagcactat 90

<210> 66

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 66

atacggttgg cagaattttt atta

24

<210> 67

<211> 105

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: randomized oligonucleotide

<400> 67

tactatacat ctatgttgg cgttgcacnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60
nnnnnnnnnn nnnnnngtta acgttaataa taatgttcc tacat 105

<210> 66
<211> 30
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 68

atgtacgaat ttttttttt tacgtttacg

30

<210> 69
<211> 81
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 69

agatctatgc cgcgcattct atggggcgaa gcgcgaaaagc gcttgcgggg tggggatcat 60
a:acccgcgt aataagaatt c 81

<210> 70

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
peptide

<400> 76

Met Pro Pro Ile Leu Trp Gly Glu Ala Arg Lys Arg Leu Trp Gly Gly
1 5 10 15

Asp His Thr Pro Pro

26

<210> 71
<211> 90
<212> DNA
<213> Artificial Sequence

<220>

<210> 76
<211> 81
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 76
agatctatgc cgcccgctatt ggacggaaat gacaaataga tataatgcgtg gtttttttc 60
tgcgtatgtt aataaagaatt c 81

<210> 76
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: stabilized
peptide

<400> 76
Met Pro Pro Leu Leu Asp Gly Asp Asp Lys
1 5 10

<210> 77
<211> 79
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 77
agatctatgc cgcccgaggtg gaagatgttg ataagacact gacagatgcg ttccattact 60
cccgccgtaa taagaattc 79

<210> 78
<211> 11
<212> PRT
<213> Artificial Sequence

<210> 78

<223> Description of Artificial Sequence: stabilized peptide

<400> 78

Met Ile Pro Arg Trp Lys Met Leu Ile Arg Gln
1 5 10

<210> 79

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 79

agatctatgc tgatgtatgc gggccgtaa taagaattc

39

<210> 80

<211> 7

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 80

Met Met Arg Val Ala Pro Pro

1 5

<210> 81

<211> 81

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 81

agatctatgc cggcggttgcg cggggcatgc gatgtatatc gggtaaatcg aatgttttg 60
ggggcgccgt aataagaatt c 81

<210> 82

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 82

Met Pro Pro Leu Arg Gly Ala Cys Asp Val Tyr Gly Val Asn

1 5 10

<210> 83

<211> 81

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 83

aatatstatgc cgcggggag agggaaacggtt gttggggatgttttcatgtttttagtgg 60
tacccggccgt aataagaatt c 81

<210> 84

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 84

Met Pro Pro Gly Arg Gly Glu Ala Val Gly Val Thr Cys Leu Ser Ala
1 5 10 15

Asn Val Tyr Pro Pro

20

<210> 85

<211> 81

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 85

agatctatgc cggcggaag ggttgtttc tttgtcgta ttttttttc ccaatatgc 60
ctcccgccgt aataagaatt c 81

<210> 86

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
peptide

<400> 86

Met Pro Pro Gly Arg Val Val Phe Phe Val Ala Ile Phe Val Ser Ala
1 5 10 15

Ile Cys Leu Pro Pro

20

<210> 87

<211> 81

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 87

agatctatgc cggcgagggt cgctcatgag agtgttaaag ggctggggaa cgttacaaaa 60
gttcggccgt aataagaatt c 81

<210> 88

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
peptide

<400> 88

Met Pro Pro Arg Ile Ala His Glu Ser Val Lys Gly Ileu Gly Asp Val
1 5 10 15

Thr Lys Ala Pro Pro

20

<210> 89

<211> 72

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 89

aatatctatgc atgacgaaca agaggaggag cacaataaaa aggataacgt aasagaacac 60
tautaaagaat tc 72

<210> 90

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
peptide

<400> 90

Met His Asp Glu Gln Glu Glu Glu His Asn Lys Lys Asp Asn Glu Lys
1 5 10 15

Glu His

<210> 91

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 91

agatctatgc accatcataaa tgaggccatg atcaacacaa tgaaaacgag gaataataag 60
aatttctcatg tttga 75

<210> 81

<211> DN

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 92

Met Gln Gln Glu His Glu Glu Gly Arg Met Ser Lys Arg Met Lys Asn
1 5 10 15

Asn Lys Asn Ser His Val

20

<210> 93

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 93

agatctatgc accatcataaa tgaggccatg atcaacacaa tgaaaacgag gaataataag 60
aatttctcatg tttga 75

<210> 94

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 94

Met Asn His His Asn Glu Ala Met Ile Asn Thr Met Lys Thr Arg Asn
1 5 10 15

Asn Lys Asn Ser His Val

20

<210> 95
<211> 72
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 95
a~~gatstatga~~ ac~~gacgacaa~~ tcagcaagag gataatcatg atc~~aataaa~~ ggataacaaa 60
taataagaat tc 72

<210> 96
<211> 18
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: stabilized
peptide

<400> 96
Met Asn Asp Asp Asn Gln Gln Glu Asp Asn His Asp Gln His Lys Asp
1 5 10 15
Asn Lys

<210> 97
<211> 72
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 97
a~~gatstatgc~~ a~~gaggcaggaa~~ tc~~agcataat~~ gata~~accatc~~ ac~~gaggataa~~ acataaagaag 60
taataagaat tc 72

<210> 98
<211> 18
<212> PRT

<213> Artificial Sequence

<220>

<213> Description of Artificial Sequence: stabilized peptide

<400> 98

Met Gln Glu Gin Asp Gln His Asn Asp Asn His His Glu Asp Lys His
1 5 10 15

Lys Lys

<210> 98

<211> 93

<212> DNA

<213> Artificial Sequence

<220>

<213> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 99

agatctatgg aagacgaaga cgagggtgcg tcagcgtgg gaggagaact ttggtcgtgg 60
caqtccggtgc gtaaacgtaa ataataagaa ttc 93

<210> 100

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<213> Description of Artificial Sequence: stabilized peptide

<400> 100

Met Glu Asp Glu Asp Glu Gly Ala Ser Ala Trp Gly Ala Glu Leu Trp
1 5 10 15

Ser Trp Gln Ser Val Arg Lys Arg Lys

20 25

<210> 101

<211> 93

<212> DNA

<213> Artificial Sequence

<220>

<213> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 101

agatctatgg aagacgaaga cgggttaggc atggggggty ggttgttcag gttcaattta 60
ttattcttcc gttaaacgtaa ataataagaa ttc 93

<210> 102

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
peptide

<400> 102

Met Glu Asp Glu Asp Gly Leu Gly Met Gly Gly Gly Leu Val Arg Leu
1 5 10 15

Thr Leu Leu Phe Phe Arg Lys Arg Lys

20 25

<210> 103

<211> 93

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid
encoding stabilized peptide

<400> 103

agatctatgg aagacgaaga cggggagagg atccaggggg ccgggtgtcc aqtagcgtcg 60
atagatacac gttaaacgtaa ataataagaa ttc 93

<210> 104

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized
peptide

<400> 104

Met Glu Asp Ser Asp Gly Glu Arg Ile Gln Gly Ala Arg Cys Pro Val
1 5 10 15

Ala Leu Val Asp Arg Arg Lys Arg Lys
20 25

<210> 105

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 105

Met Glu Asp Glu Asp Asp Arg Gly Arg Gly Arg
1 5 10

<210> 106

<211> 93

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 106

agatctatgg aagacgaaga cgacaggggg cgtggcggtt agcttttaagt tgcgttaagt 60
tgcgagatac gtaaacgtaa ataataagaa ttc 93

<210> 107

<211> 93

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 107

agatctatgg aagacgaaga cggggggcc gggaggaggg ctgttggtttgcgttgtt 60
attggggAAC gtaaacgtaa ataataagaa ttc 93

<210> 108

<211> 28

<212> PRI

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 108

Met	Glu	Asp	Glu	Asp	Gly	Gly	Ala	Gly	Arg	Arg	Ala	Cys	Leu	Cys	Ser
1				5					10					15	

Ala	Leu	Val	Gly	Glu	Arg	Lys	Arg	Lys							
				20				25							

<210> 109

<211> 90

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: nucleic acid encoding stabilized peptide

<400> 109

agatctatgg	aagacgaaga	caaggcgtcgc	gagaggagtg	caaaagggcg	tcatgtcgg	60
cgtcgatgc	gtaaaacgtaa	ataagactgt				90

<210> 110

<211> 25

<212> PRI

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: stabilized peptide

<400> 110

Met	Glu	Asp	Glu	Asp	Lys	Arg	Arg	Glu	Arg	Ser	Ala	Lys	Gly	Arg	His
1				5				10						15	

Val	Gly	Arg	Ser	Met	Arg	Lys	Arg	Lys							
				20				25							